REMARKS

Claims 1-24 are pending in this application. Applicants acknowledge, with appreciation, the Examiner's allowance of claims 23 and 24. Applicants also acknowledge, with appreciation, the Examiner's indication that claims 4-6, 9, 11 and 14 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

In this Amendment, claims 1 and 22 have been amended. Care has been exercised to avoid the introduction of new matter. Adequate descriptive support for the amendment of claims 1 and 22 can be found on, for example, page 17, line 23 to page 18, line 5, and page 23, line 23 to page 24, line 3 of the specification.

Claims 1, 2, 7, 8, 10, 12, 13, 15-20 and 22 have been rejected under 35 U.S.C. §102(b) as being anticipated by Sugiura.

The Examiner maintained her position on rejection of claims 1, 2, 7, 8, 10, 12, 13, 15-20 and 22 under 35 U.S.C. §102(b). In response, Applicants have amended independent claims 1 and 22 to recite that the contour correction means is configured for determining whether a probable edge point is a document edge point indicating the position of a document edge on the basis of the position of the probable edge point, and recognizing the probable edge point as the document edge point, upon determining the probable edge point to be the document edge point. Applicants submit that Sugiura does not identically disclose these limitations.

The claimed invention includes the contour detecting means for detecting a probable edge point thought to be a document edge point. The contour correction means determines whether the probable edge point is a document edge point indicating the position of a document edge on the basis of the position of the probable edge point. The contour correction means recognizes the

probable edge point as the document edge point, upon determining the probable edge point to be

the document edge point (when the contour correction means determines that the probable edge

point is not a document edge point, that probable edge point is not recognized as an actual edge

point). See the specification on page 4, lines 19-21; page 14, lines 13-22; page 17, line 23 to

page 18, line 5; and page 23, line 23 to page 24, line 3.

In short, the claimed invention is configured for detecting a probable edge point thought

to be a document edge point, determining whether the probable edge point is a document edge

point, and recognizing the probable edge point as an actual edge point if it is determined that the

probable edge point is the actual edge point.

For example, at a sky shot (see Fig. 1), when projection area 103 of a fluorescent lamp

partly overlaps with part of document contour 104, respective edge points of projection area 103

and a document image area are detected as probable edge points. It is then determined whether

each probable point corresponds to a document edge point. The probable edge points of

projection area 103 are not recognized as edge points of the document area, while the edge points

of the document area 104 are recognized as edge points of the document image. Accordingly, it

is possible to reproduce a document image properly.

Sugiura discloses an image reading apparatus capable of detecting a position of a

document image based on detected density of the image. Specifically, the location of the edge of

a document is detected as the point where density changes from a white level to a black level

(paragraph 5, lines 53-59).

According to Sugiura, it is Applicants' position that Sugiura's apparatus directly

recognizes the point where density changes from a white level to a black level as the edge point

of a document area. Sugiura does not disclose detecting a pixel with the quantity of change in

density higher than a threshold value <u>as a probable edge point thought to be a document edge</u> <u>point</u> before the point where density changes from a white level to a black level is recognized as the edge point of a document area. Moreover, Sugiura does not disclose determining whether the probable edge point is a document edge point indicating the position of a document edge on the basis of the position of the probable edge point, and recognizing the probable edge point as the document edge point, upon determining the probable edge point to be the document edge point, as claimed.

Accordingly, it is understandable that Sugiura's apparatus is not capable of reproducing a document image properly at the sky shot. Applicants invite the Examiner's attention to Exhibit A. Exhibit A shows a projection area and a document image area which overlap with each other. Density changes from a white level to a black level show each edge point of the projection area and the document image area. Therefore, Sugiura's apparatus recognizes the edge points of the projection area and the document image area as the location of the edge of the document. In contrast, the claimed invention is configured for determining whether the probable edge point is a document edge point indicating the position of a document edge on the basis of the position of the probable edge point. As shown in Exhibit B, the document image area is properly distinguished from the projection area in the claimed invention.

Based upon the foregoing, Applicants submit that Sugiura does not disclose an image apparatus and a processing apparatus including all the limitations recited in respective independent claims 1 and 22, as amended, within the meaning of 35 U.S.C. §102. Dependent claims 2, 7, 8, 10, 12, 13 and 15-20 are also patentably distinguishable over Sugiura at least because they respectively include all the limitations recited in independent claim 1. Applicants,

therefore, respectfully solicit withdrawal of the rejection of claims 1, 2, 7, 8, 10, 12, 13, 15-20 and 22 under 35 U.S.C. §102(b) and favorable consideration thereof.

Claim 3 has been rejected under 35 U.S.C. §103(a) as being unpatentable over Sugiura in view of Houjiyou et al.; and claim 21 has been rejected under 35 U.S.C. §103(a) as being unpatentable over Sugiura in view of Migita et al.

It is submitted that the applied combination of the references does not teach or suggest an image reading apparatus including all the limitations recited in claims 3 and 21, at least because the claims include all the limitations recited in independent claim 1. Houjiyou et al. and Migita et al. do not teach an image reading apparatus of claim 1, and thus, do not cure the deficiencies of Sugiura. Accordingly, withdrawal of the rejection of claims 3 and 21 under 35 U.S.C. §103 is respectfully solicited.

Conclusion.

It should, therefore, be apparent that the imposed rejections have been overcome and that all pending claims are in condition for immediate allowance. Favorable consideration is, therefore, respectfully solicited.
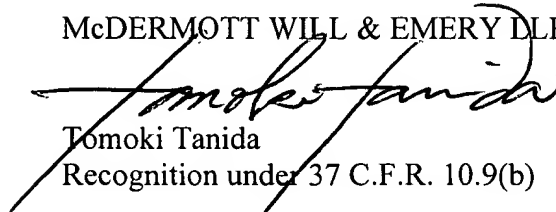
To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper,

including extension of time fees, to Deposit Account 500417 and please credit any excess fees to

such deposit account.

Respectfully submitted,

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